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TRANSMITTAL FORM

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Total Number of Pages in This Submission

3

Application Number 10 / 772,188

Filing Date 02-03-2004

First Named Inventor GRALENSKI

Art Unit 1763

Examiner Name K. Moore

Attorney Docket Number Solaicx 1

ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input checked="" type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
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<input type="checkbox"/> Reply to Missing Parts/Incomplete Application	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	Remarks Substitute Sheet and copy of Notice of Non Compliant Amendment	

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Woodside IP Group		
Signature			
Printed name	Michael Hetherington		
Date	October 2, 2006	Reg. No.	32,357

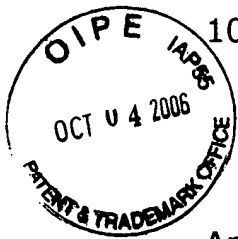
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Signature	<i>Michael Hetherington</i>		
Typed or printed name	Michael Hetherington	Date	Oct. 2, 2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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10/772,188

In the United States Patent and Trademark Office

Applicant:	Nicholas M. GRALENSKI	Docket:	Solaicx 1
Serial No:	10/772,188	Art Unit:	1763
Confirm. No.	4671	Examiner:	Karla A. Moore
Filed:	February 3, 2004	Date:	Oct. 2, 2006
For:	High Reflectivity Atmospheric Pressure Furnace for Preventing Contamination of A Workpiece		

Response to Notice of Non Compliant Amendment

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Dear Examiner Moore:

In response to the Notice of Non Compliant Amendment mailed Sept. 20, 2006, a substitute page 21 of the Specification showing changes is attached.

Respectfully submitted,

Solaicx, Inc.

By: Michael Hetherington

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Referring to Figure 8, one of the mechanisms at work here is that as wire heats up to high temperature it undergoes substantial thermal expansion. It must move or squirm to accommodate length change. Squirming distorts the element geometry and can be a factor in coil spacing. Thus, an aspect of the invention allows free thermal expansion motion, retains intended geometry and avoids stressing of the hot, weak element wire.

4. Heating Element Density

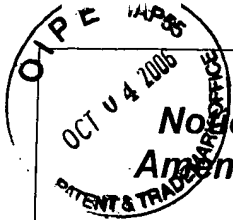
Referring to Figure 6, for high temperature service, a large number of elements working together will reduce the risk that the elements may reach or exceed their maximum service temperature. As the number of elements increases, the ΔT decreases. The ultimate configuration would be one wherein the work is 100% enclosed in a hot surface while the hot surface is surrounded by another enclosure which prevents any heat from escaping. Such a configuration is impossible, but an element design which allows close approximation is very advantageous. In an aspect of the invention, the ability to dispose a relatively dense planar array of heating elements above and below the work and in close proximity to a workpiece, in combination with the highly reflective walls of the process chamber, provides a substantially isothermal chamber with respect to the workpiece where the ΔT is a minimum.

5. Electrical Insulation

Referring to Figures 7, 8A and 8B, electrically powered heat elements will obviously need some type of insulation to prevent closely spaced wires from shorting together or short-circuiting to conductive parts of a furnace structure. At high temperature, however, this insulation must be very carefully chosen. Even high temperature materials like quartz and ceramic are not necessarily adequate.

The presently available heating element material, Kanthal, is a metallic alloy made of nickel, iron containing (apart from iron) chromium (20-30 %), and a few percent aluminum (4-7.5 %), and trace amounts of cobalt. For high temperature service, this alloy, by its nature, forms a surface layer of aluminum oxide. This oxide is a form of corrosion which then becomes highly protective to the remaining underlying metal. Aluminum oxide (in pure crystalline form, sapphire) is one of the most durable of ceramics. It is this nature of Kanthal which makes it a prime high temperature element material.

Any contamination of this surface oxide is likely to degrade its performance. Any insulator in contact with the hot wire would have to be a contamination suspect unless it also is high-grade aluminum oxide. Thus, alumina ceramic emerges as the preferred high temperature insulator, because of its compatibility with Kanthal.



**Notice of Non-Compliant
Amendment (37 CFR 1.121)**

Application No.

10/772,188

Examiner

Applicant(s)

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

The amendment document filed on 09 June 2006 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- ☒ 1. Amendments to the specification:
- ☒ A. Amended paragraph(s) do not include markings.
 - ☐ B. New paragraph(s) should not be underlined.
 - ☒ C. Other Replacement paragraph or section "must be a marked up version showing the changes".
- ☐ 2. Abstract:
- ☐ A. Not presented on a separate sheet. 37 CFR 1.72.
 - ☐ B. Other _____.
- ☐ 3. Amendments to the drawings:
- ☐ A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
 - ☐ B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
 - ☐ C. Other _____.
- ☐ 4. Amendments to the claims:
- ☐ A. A complete listing of all of the claims is not present.
 - ☐ B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
 - ☐ C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
 - ☐ D. The claims of this amendment paper have not been presented in ascending numerical order.
 - ☐ E. Other: _____.
- ☐ 5. Other (e.g., the amendment is unsigned or not signed in accordance with 37 CFR 1.4):

For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714.

TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:

1. Applicant is given **no new time period** if the non-compliant amendment is an after-final amendment, an amendment filed after allowance, or a drawing submission (only). If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted.
2. Applicant is given **one month**, or thirty (30) days, whichever is longer, from the mail date of this notice to supply the correction, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a Quayle action. If any of above boxes 1. to 4. are checked, the correction required is only the **corrected section** of the non-compliant amendment in compliance with 37 CFR 1.121.

Extensions of time are available under 37 CFR 1.136(a) only if the non-compliant amendment is a non-final amendment or an amendment filed in response to a Quayle action.

Failure to timely respond to this notice will result in:

Abandonment of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a Quayle action; or

Non-entry of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

Legal Instruments Examiner (LIE), if applicable

Nancy Wagstaff

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